

**Abstract**

The invention relates to a device for generating extreme ultraviolet and soft x-rays from a gas discharge, operated on the left-hand branch of the Paschen curve. There are two main electrodes, between which there is a gas-filled space, and each main electrode exhibits an opening, by means of which an axis of symmetry (5) is defined; and there are means to increase the conversion efficiency. Preferred fields of application are those requiring extreme ultraviolet (EUV) radiation or soft x-rays at a wavelength ranging from approximately 1 to 20 nm, and in particular around 13 nm, such as in EUV lithography.